

Jon Parker, Head of Electricity Network Access  
[NetworkAccessReform@ofgem.gov.uk](mailto:NetworkAccessReform@ofgem.gov.uk)  
Ofgem

Our ref: Network Access

18 September 2018

### Network Access consultation: EA Technology's Response

Dear Jon,

EA Technology welcomes the opportunity to respond to Ofgem's consultation on Network Access. EA Technology is an employee-owned SME with a long history of innovation in the electricity distribution industry.

As a service provider to the electricity industry, EA Technology welcomes the opportunity to play a part in the transformation of the electricity system to meet future needs. We are of the view that this consultation is timely and important, and we are therefore pleased to provide our written response, below.

**Question 1:** Do you agree with the case for change as set out in chapter 2? Please give reasons for your response, and include evidence to support this where possible.

We agree with the case for change. The combination of LCT uptake, new sources of flexibility and the growth of distributed energy sources offers an unprecedented opportunity to transform the electricity system, resulting in reduced costs and improved resilience.

We believe that the Baringa study has correctly identified the three priority areas for change, namely: enabling growth in demand from LCTs, managing constraints on the distribution networks as a result of this growth, and ensuring an effective interface between transmission and distribution.

The Open Networks Future Worlds consultation document<sup>1</sup> further states that *"challenges of decarbonisation, decentralisation and digitisation have the potential to create whole system opportunities by transforming the way distribution networks behave and creating new flexibility market opportunities for potential service providers. These markets will enable flexibility services to compete alongside traditional investment options for all relevant network reinforcements or upgrades of significant value, and to make the most cost-effective investment decisions in the future."*

<sup>1</sup> <http://www.energynetworks.org/electricity/futures/open-networks-project/future-worlds/future-worlds-consultation.html>

To deliver on this vision will require radical change. Unfortunately, we remain concerned by the lack of ambition in Ofgem's current proposals, which appear to be at best incremental, and at worst introduce significant complexity on an already complicated market.

**Question 2:** Do you agree with our proposal that access rights should be reviewed, with the aim to improve their definition and choice? Please provide reasons for your response and, where possible, evidence to support your views.

We agree that access rights should be reviewed and clarified, but disagree with elements of the proposed positions. We have provided greater detail in our response to Question 3.

**Question 3:** Specifically, do you have views on whether options should be developed in the following areas as part of a review? Please give reasons for your response, and where possible, please provide evidence to support your views:

- a) Establishing a clear access limit for small users, with greater choice of options (as considered under b) and c) below) above a core threshold – do you agree with our proposal in paragraphs 3.5-3.10 that this should be considered? Do you have views on how a core threshold could be set?
- b) Firm/non-firm and time-profiled access – do you agree with our proposal outlined in paragraphs 3.15-3.21 that these options should be developed?
- c) Duration and depth of access, discussed in paragraph 3.25-3.32 - would these options be feasible and beneficial?
- d) At transmission or distribution in particular, or are both equally important – as discussed in this chapter?

a) On establishing a clear access limit for small users: we strongly disagree with the implied notion that a certain level of electrical energy use can be classified as “essential” and charged differently. It is not the role of a national energy regulator to determine what usage level is “essential” or “non-essential”. Customer behaviour and priorities are changing rapidly and therefore such determinations should be driven via market mechanisms, not by central diktat.

b) On improved definition and choice of access for larger users: we strongly agree that the current definitions must be improved. “Firm” and “non-firm” connections, for example, are DNO-centric terms defined by the nature of the upstream network and do not directly relate to the service provided. We recognise that “time profiled” could lower connection costs for some scenarios but have concerns that such arrangements could have operational impacts on the network by introducing new peak demands on the network (as occurred with the Economy 7 tariff, for example).

c) The Open Networks Future Worlds consultation identifies a number of possible worlds where connection parameters are flexibly defined to facilitate lower cost connections through interruptible supplies and/or lower cost energy through local trading. We therefore welcome proposals to define access rights more clearly and to develop the concept of “shallow access rights”.

d) We have no views on whether the existing arrangements at transmission level are currently fit for purpose. We strongly believe that change is required at the distribution level.

**Question 4:** Do you agree with the key links between access and charging we have identified in table 1? Why or why not? Do you think there are other key links we have not identified? Where possible, please provide evidence to support your views.

We have some concerns regarding the content of table 1, as described below:

**Firmness:** there is an implicit difficulty here, because “firmness” is defined partly by the physical network assets associated with the connection (which are enduring and inflexible) and partly by the capacity headroom on the associated circuit (which is variable). It seems wrong to charge for (enduring, inflexible) network assets though (variable) DUoS charges, and equally wrong to charge for (variable) network capacity though a (fixed, one-off) connection charge.

For example, the current best practice from DNOs can identify scenarios that will result in a loss of network access, but these do not provide insight into how many hours or days of constraint this may represent. The result of this approach means that, in congested network groups, the DNOs operate a form of constraint stack based on first on last off and they are keen to demonstrate that the last on first off arrangements are being adhered to. Often, these technical constraint scenarios are recorded in the customers connection offer and become regarded as a fixed, final and enduring commercial arrangement.

This does not reflect the reality that network topology will change, new operational practices such as Automated Network Management become employed, electrical demand consumption or fault levels may change which could not reasonably be foreseen at the time of connection of existing customers. The need to not deviate from enduring connection agreements currently has a stifling effect on operational innovation and we hope that Ofgem’s proposals will address this.

**Time-profiled:** could this cause confusion for the network user? i.e. network charges might be low when energy charges are high (or vice-versa). Would time-profiled pricing need to be so simple (e.g. Economy 7) that it negates any local network benefits?

**Duration:** this presents a similar dilemma to “firmness” (above). Network assets required for the connection are permanent, so any flexible charging based on use will need to be reconciled with the fixed costs of providing the connection.

**Depth/local:** again, there appears to be some confusion between the cost of establishing the connection, and the ongoing cost of providing that connection. The proposals need to be clear about which cost is being addressed. The wording of this section implies that “local access” is using power supplied by generation connected to the local network feeder and that “reliant on the wider network” implies that power drawn by a user is not sourced via the wider network. This is not true now and is likely not to be true for many local feeders well into the next decade and beyond, as shown by the outputs of Workstream Three of the Smart Grid Forum. Network monitoring at every local substation is required to be unequivocal about which part of the network is involved in providing power at any given time.

**Question 5:** Do you agree with our proposal that targeted areas of allocation of access should be reviewed? Please give any specific views on the areas below, together with reasons for your response. Where possible, please provide evidence to support your views:

- a) Improved queue management as the priority area for improving initial allocation of access, as outlined in paragraphs 3.41-3.44?
- b) Not to consider the potential role of auctions for initial allocation of access as part of a review at this time, as discussed in paragraph 3.44?
- c) To review the areas outlined in paragraphs 3.45-3.48 to support re-allocation of access?

We support the proposition of a “use it or lose it” approach allocation of capacity tested by progression through appropriate project development milestones would give better signals to the network operator with regard to the future duty of their networks, and in turn allow network operators to accurately describe how much capacity is truly available.

We believe that temporary capacity re-allocation will help some non-firm connection owners mitigate their risk, but we observe that not all customers will be in a position to undertake these arrangements. We question why Ofgem have are not consulted upon network-led initiatives to manage curtailment of non-firm connections such as those discussed in the Solar Trade Associations best practice guide to the management of non-firm constraints<sup>2</sup>.

We observe that it is very difficult to separate the question of non-firm access from the question of whether to socialise the costs of reinforcement for export customers. Despite this, we still think there are still options available that respect this charging regime, support the business needs of non-firm connection owners and still allow network operators to avoid the “last on first off” constraint stack from undermining operational innovation.

One such model would follow a path similar (but not identical) to that used under UKPN’s flexible plug and play project. In this model, non-firm connection owners carry the liability for curtailed energy up to a total liability threshold that was reflective of the network congestion when they invested into their connection, but not descriptive of the exact network conditions<sup>3</sup>. Such an approach could allow DSOs to deviate from the last-on, first-off stack and the rigid definition of “constraining circuits” without prejudicing the original investment expectations of their customers.

Such an approach is important as it allows the network to develop in a flexible manner whilst still respecting the access rights of customers. If desirable, such an approach could also be linked to a constraint management incentive scheme where the DSO could be rewarded for outperformance in reducing constrained energy (over a given period) beneath the original expectations of the non-firm connectee’s holding who hold the risk.

<sup>2</sup> [https://www.solar-trade.org.uk/wp-content/uploads/2018/07/STA-Best-Industry-Practice-Manual\\_03.07.2018.pdf](https://www.solar-trade.org.uk/wp-content/uploads/2018/07/STA-Best-Industry-Practice-Manual_03.07.2018.pdf)

<sup>3</sup> According to the STA constraint best practice report, DNOs appear to be converging upon recording scenarios within a connection offer where the DNO may retain rights to curtail a generator with no compensation as a means to inform customers of their risk. These scenarios are based on the network congestion at the time of connection. But over time, electrical demand consumption can reduce or increase and network topology may change. How can a DSO be expected to run their network efficiently if they are forced to retain a “last on-first off” constraint arrangement that is no longer reflective of network conditions?

Funding for such incentives need not come from domestic customers. As shown in the STA best practice guide to constraint management, the value of lost production per year from non-firm solar connections alone is in the region of £10m - let alone the lost production from other technologies. It is our view that an incentive scheme which allowed DSOs and non-firm connection owners to share the upside from improved network constraint management would be a benefit to all, and not just those who were able to temporarily swap network access.

**Question 6:** Do you agree that a comprehensive review of forward-looking DUoS charging methodologies, as outlined in paragraphs 4.3-4.7, should be undertaken? Please provide reasons for your response and, where possible, evidence to support your position.

Yes, but we do not believe that these ongoing DUoS charges can be considered separately from initial connection charges.

If initial connection charges are shallow, then the remaining cost of providing the connection must be recovered through DUoS. If the full cost of providing a connection is charged up-front, then there is no need to recover these costs through DUoS. It is therefore important to consider the complete costs of connection provision in determining both DUoS and the initial connection charge.

**Question 7:** Do you agree that the distribution connection charging boundary should be reviewed, but not the transmission connection boundary? Please provide reasons for your response and, where possible, evidence to support your position.

We strongly support a move to a shallow connection charge boundary at distribution level for the reasons described in 4.11. We believe that a shallow connection charging boundary (combined with a well-managed Totex incentive scheme) will lead to connections that are truly faster and more efficient. This will provide simplicity, clarity and ensure that initial connection costs do not inhibit the uptake of LCTs.

However, we recognise that such a regime will create additional upstream costs which must be paid for. If these costs are to be recovered through a site-specific DUoS, it will be essential to tightly regulate this charge to protect consumers from excessive (and unavoidable) DUoS charges.

We are not aware of any specific issues with the current TNUoS regime, and therefore agree with the Ofgem's position as set out in 4.10.

**Question 8:** Do you agree that the basis of forward-looking TNUoS charging should be reviewed in targeted areas? If you have views on whether we should review the following specific areas please also provide these:

Getting more out of our electricity networks by reforming access and forward-looking charging arrangements

a) Do you agree that forward-looking TNUoS charges for small distributed generation (DG) should be reviewed, as outlined in paragraphs 4.19-4.23?

b) Do you consider that forward-looking TNUoS charges for demand should be reviewed, as outlined in paragraphs 4.24-4.27?

Please provide reasons for your response and, where possible, evidence to support your position.

We have no specific views on the proposals for these targeted areas.

**Question 9:** Do you agree that a broader review of forward-looking TNUoS charges, or the socialisation of Connect and Manage costs through BSUoS at this time, should not be prioritised for review? Please provide reasons for your response and, where possible, evidence to support your position.

We have no specific views on the proposals for these targeted areas.

**Question 10:** Do you agree that there would be value in further work in assessing options to make BSUoS more cost-reflective, and if so, that an ESO-led industry taskforce would be the best way to take this forward?

We have no specific views on the proposals for these targeted areas.

**Question 11:** What are your views on whether Ofgem or the industry should lead the review of different areas? Please specify which of SCR scope options A-C you favour, or describe your alternative proposal if applicable. Please give reasons for your view.

We understand Ofgem's desire for the proposed SCR to be as narrow as possible in scope. However, the wider issues of allocation of access rights and definition of choice of access rights for larger users appear to be intrinsically linked to the "core" SCR areas.

We do not have a strong view on this question, but feel that it may be premature to be asking it. We would welcome further consultation on the definition and scope of the proposed SCR, to ensure all stakeholders are able to understand and comment on the potential impact of this review.

**Question 12:** Do you agree with our proposal to launch an 'Option 1' SCR for areas of review that we lead on? Please give reasons for your view.

We agree that Option 1, compelling the Licensees to raise modification proposals, is the correct way forward. A similar Licensee-led approach was successfully used in the development of the Common Network Asset Indices Methodology<sup>4</sup> and we believe this is the most appropriate way to ensure that any proposed modifications are effective, timely and practical.

---

<sup>4</sup> <https://www.ofgem.gov.uk/publications-and-updates/decision-dno-common-network-asset-indices-methodology>



**Question 13:** Do you agree with the introduction of a licence condition on the basis described in paragraphs 5.11 and 5.12 and Appendix 5? Why or why not? Do you have any comments on the key elements set out in table 7 of Appendix 5a, or consider there are any other key elements which should be included? Please give reasons for your view.

We agree that the introduction of a license condition is the correct way forward. A similar licence condition approach (Licence Condition 51) was successfully used to drive the development of the Common Network Asset Indices Methodology and we believe this is the most appropriate way to ensure that the development of proposals has the full engagement of the Licensees.

**Question 14:** Do you have any comments on the draft wording of the outline licence condition included at Appendix 5b? Please give reasons for your view.

We have no specific views on the draft wording of the outline licence condition.

**Question 15:** What are your views on our indicative timelines? Do you foresee any potential challenges to, or implications of, the proposed timelines and how could these be mitigated?

We consider the indicative timelines to be challenging. This exercise will be far wider in scope and will involve many more stakeholders than the development of the Common Network Asset Indices Methodology, which took two years from issue of SLC 51 (in 2015) through to implementation (in 2017).

Furthermore, the consumer-led change in the uptake of LCTs may be much more rapid than regulatory timescales allow. We believe it would be prudent to also develop a fall-back position in the event that energy consumption patterns change significantly in the coming years.

**Question 16:** What are your views on our proposals for coordinating and engaging stakeholders in this work?

We broadly support the proposals for coordinating and engaging stakeholders, but we believe specific actions should be taken to recognise and engage with the outputs from the ENA-led Open Networks project<sup>5</sup>. The project has received considerable buy-in from stakeholders and has formed a representative Advisory Group containing approximately 40 experts from across the GB energy industry including Suppliers, Aggregators, IDNOs, industry groups, academia, Generators, consumer groups, the gas industry, Government, Ofgem and other industry parties. The project has already made significant progress in formally gathering stakeholder views on connection provision and charging arrangements and we would not want to see this work wasted (or duplicated).

We hope you find our response to this consultation useful. We strongly believe that the successful reform of access and forward-looking charging arrangements will unleash rapid

<sup>5</sup> <http://www.energynetworks.org/electricity/futures/open-networks-project/>

uptake of LCTs, while ensuring that network constraints are adequately addressed. This will drive down energy costs, while maintaining the essential resilience of the electricity network. We would therefore be delighted to discuss any of these points in more detail (if required) and look forward to seeing the outcome of the consultation process.

Yours sincerely,



**Dave A Roberts**

Director – Strategy & Interventions, EA Technology Ltd

t. +44 (0) 151 347 2318

e. [davea.roberts@eatechnology.com](mailto:davea.roberts@eatechnology.com)